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OPEN LETTERS.

What name shall be used? What is an authority?

If a worker in the botanical vineyard who has neither right nor claim to the title of "Systematic Botanist," may be permitted to ask a question concerning the proper nomenclature of seed-plants, perhaps a little illumination may be graciously let into his unsystematic brain-box by some of those who not only claim the title, but wear it right royally. The question is a brief one:

If we are not to use the oldest attainable specific name for a plant, what specific name are we to use?

Certainly we can not use the "oldest binomial," for our notions of a genus, and its inclusions are constantly changing. Nor is it particularly helpful to suggest that the name sanctioned by "authority" is the proper one, for after all—and I speak with bated breath, as one treading on holy ground—who *is* this "authority" anyhow? Is it the first worker in a group or the last? Is it the dead or the living? Is it this institution or is it that? Or is it the consensus of workers along some line? I, for one, have always supposed that attempts to constitute one's self, or one's descendants, or one's co-workers a botanical, zoological, geological or petrographical hierarchy was, to say the least, unscientific. If great groups of humble workers—such as those who gain a little cheap notoriety by trying as best they may to get together a local flora in which the results of their best bibliographical and analytic ability are collected—are to be decapitated at one fell blow, it is important to have it understood just why they are disposed of and just who volunteers to pull the guillotine-lever.

There is such a constantly increasing number of young, misguided enthusiasts among the group which we may for convenience call the "botanists of North America," that something more than reading the riot-act will be necessary to convince them that, after all is said, the temper of Charles Darwin is not a pretty fair one to try to imitate. Consequently they will doubtless continue to struggle along, doing the best they can, differing from "the authority" when they honestly have to differ, submitting their efforts to the test of time and the correction of wider and abler research, receiving honest criticism with what grace human nature permits and, withal, meaning no affront, personal or otherwise, to the authorities with whom they cheaply differ.

On the whole this second question troubles the writer as well as the first. An answer is respectfully asked. "What *is* an authority?"—CONWAY MACMILLAN, *University of Minnesota*.

NOTES AND NEWS.

HENRI JUELLE has, by three distinct lines of proof, shown that when in the light the absence of CO_2 accelerates the transpiration of green parts of plants, this acceleration is due to the fact that the energy of the rays absorbed by the chlorophyll is not employed for the decomposition of CO_2 , but operates entirely in increasing transpiration.

PROFESSOR BYRON D. HALSTED has been elected secretary of Section F. of the A. A. A. S., for the meeting to be held next August in Rochester, N. Y.

MESSRS. F. H. KNOWLTON and THEO. HOLM, of the U. S. National Museum, sailed for Europe early this month for a two months visit both for science and pleasure.

A RESOLUTION recommending the establishment of a National Arboretum at Washington was approved by the Botanical Club, Section F, and the general Association.

DR. J. M. MACFARLANE, assistant in botany in the University of Edinburgh, was made welcome by the American botanists at the Washington meeting, and took an active part in the proceedings.

MR. THOMAS MEEHAN has found cleistogamous flowers in abundance on *Polygonum acre* and suspects the same habit in other species. He expects to make this the topic of a note in the Proceedings of the Philadelphia Academy.

PROFESSOR ANDREA KROSSNOFF, of the University of Charkoff, S. Russia, was present at the botanical meetings of the Association, and desired to make arrangements for the exchange of plants of the Caucasus and other Russian districts for the plants of central and western N. America.

THE BOTANICAL papers at Washington were so numerous that many well known botanists, who had intended to read, presented no papers. The feeling was strong in favor of a separate Section of Botany, and notice of an amendment to that effect was given, to be acted upon at the next meeting of the Association.

MR. O. F. COOK, instructor in biology at Syracuse University, is at the head of an expedition, to Liberia and other parts of Africa, which is to sail about Nov. 1. The object of the expedition is to study the natural history of the country, especially the plants and insects. Mr. Cook will be glad to hear from any persons who would like material from that region.

DR. C. F. MILLSAUGH, Morgantown, W. Va., will issue a preliminary catalogue of the Flora of West Virginia the coming winter; with his own work in the State he is desirous of compiling that of others as fully as possible. Any botanists who have worked in the State, and who will send a list of species they noted there, giving localities, will receive full credit, and six copies of the Flora as return for the kindness.

MR. T. KING, of Wellington, New Zealand, who was formerly conservator of the state forests on those islands, is preparing sets of New Zealand plants of from 500 to 1000 species, which he will dispose of at \$4.50 per hundred. Mr. King is the most prominent botanist of New Zealand, and author of "The Forest Flora of N. Z." and of a "Student's Manual of the Flora of N. Z." This is a good opportunity for any who may wish to secure plants from that region.

E. AUBERT finds a simultaneous evolution of O and CO₂ in certain Cactaceæ when the illumination is of moderate intensity and the tem-

perature high (35° C.) The explanation seems to be that the respiration of the tissues is sufficiently active to produce more CO₂ than can be assimilated by the superficial chlorophyllous tissue. When the temperature is reduced to 10°–15°, or when the intensity of the light is increased, the CO₂ is not recognizable.—Cf. *Compt. Rend.* 112. 674.

BRAZIL IS to have an Agricultural and Mechanical College. A syndicate of capitalists has already secured a fund of \$200,000 for its endowment, and the state and general governments will aid it. It is to be located in Sao Paulo, under the Tropic of Capricorn, in the best part of the Republic. Its promoters expect to make it the largest institution of the kind in existence. Professor L. H. Bailey has been tendered the presidency. The offer is a very flattering one, not only in a financial way, but also in the opportunity for work in a splendid flora.

A USEFUL SOUVENIR was presented to the botanists by the Forestry Division of the Department of Agriculture. It contained a list of the trees to be found in the various parks of Washington with maps that serve as a complete direction. The souvenir is a curiosity in the matter of synonymy; containing also the description of a new species, a single specimen of which is now growing on the grounds of the Agricultural Department, but whose nativity no one knows, it furthermore raises the question whether describing a plant in a souvenir is publication.

IN CONNECTION with Dr. Halsted's note (p. 266) on the influence of copper salts on germination, a recent paper of O. Loew¹ on the poisonous action of distilled water is of interest. Such an action has been observed in the case of several Algæ, notably Spirogyra. Nägeli determined that this was due to the traces (1:10,000,000) of copper derived from the distillation apparatus and presumably dissolved as carbonate. The poisonous action is not exerted by water distilled in glass vessels, nor after the distillation of the first 25 liter seven from metal apparatus.

PROFESSOR R. PIROTTA is writing a monograph of *Keteleeria Fortunei* Carr., a monotypic Conifer. In a preliminary note² he shows that the primary root is diarchous and contains a large pith, in the middle of which is a resiniferous duct of considerable size; similar ducts are also irregularly scattered in the secondary wood; besides that the secondary bark shows several mucilage-cells (*idioblasti mucipari*). In contrast to the root, the stem has resiniferous ducts and mucilage-cells in its primary bark and wood, but none in the secondary. The leaves have only stomates on their inferior face. The mesophyll shows three zones: a palisade tissue of two rows of perpendicular cells, a pneumatic tissue of about three rows of rather irregular cells, which form large lacunes, and finally an uncolored conductive tissue, surrounding the fibro-vascular bundles. Two resiniferous ducts and some very large, roundish mucilage-cells were observed in the leaves, especially distinct in tangential or longitudinal sections.—T. H.

¹ Landw. Jahrb. 20. 235. (1891).

² Annuario del R. Istituto botanico di Roma, anno IV, 1891.